15T Programmable Lab Hot Press

Item Number: KT-PCV1

Introduction

High-performance 15-ton programmable lab hot press featuring dual independently heated platens, accurate temperature control up to 300°C, and rapid water cooling. Perfect for polymer composites, battery research, powder metallurgy, and electronic packaging applications in demanding industrial laboratory environments.

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Application	Description	Key Benefit
Polymer & Composite Molding	Compression molding of thermoplastics, thermosets, and fiber-reinforced composites into test coupons or small panels.	Ensures void-free, dimensionally accurate parts with tailored mechanical properties.
Lithium Battery Research	Preparation of solid-state electrolyte pellets, electrode calendering, and lamination of pouch/coin cell components.	Achieves optimal density and interfacial contact critical for ionic conductivity and cycle life.
Electronic Component Lamination	Bonding of flexible circuits, multilayer substrates, and encapsulation of sensitive electronics under heat and pressure.	Delivers uniform pressure and temperature for reliable, warp-free bonding in miniaturized devices.
Powder Metallurgy & Ceramics	Hot pressing of metal or ceramic powders to achieve near-net shape parts with reduced porosity and enhanced strength.	Combines compaction and sintering in one step, minimizing grain growth and improving mechanical integrity.
Carbon Fiber Composite Molding	Fabrication of high-performance CFRP laminates for aerospace and automotive lightweight structures.	Controlled pressure and rapid cooling preserve fiber alignment and accelerate production of test specimens.
Adhesive Bonding Studies	Evaluation of structural adhesives and thermoplastic films under controlled thermal and compressive loads.	Enables reproducible bonding conditions for shear and peel testing, supporting materials R&D.

Parameter	Specification	Notes
Model	KT-PCV1	
Working Pressure	0 – 15 Tons (150 kN)	Adjustable
Working Temperature	0 – 300 °C	
Heating Method	Dual platen independent embedded heating	Upper/lower platens independently controlled
Heating Power	1600 W	
Platen Dimension	200 × 200 mm	
Max. Opening	50 mm	Maximum stroke between platens
Platen Cooling	Rapid water cooling channels, supports recirculating chiller	External chiller or water supply required
Controller	Temperature & pressure programmable touchscreen controller	Supports multi-segment programming
Power Supply	AC 220V / 50Hz	Custom voltage available upon request
Certificate	CE	
Setup Dimension	260 × 347 × 422 mm (W × D × H)	Compact benchtop design
Net Weight	130 kg	Heavy-duty hydraulic structure